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ABSTRACT

This paper asserts that, despite rhetoric of added value, facilities management suffers a dearth of objectively researched, publicly available information concerning the impact of facilities on businesses at the level of market sectors or individual organizations. The paper aims to correct that situation for United Kingdom higher education institutions. A survey of undergraduates starting university in 2001 confirmed, to high levels of significance, earlier research with the 2000 class. For many institutions, facilities factors, where provided to a high standard, are perceived as having an important influence on students' choice of institution. Year-on-year comparisons show strong agreement at the global level and, where data could be gathered, at the institutional level. Individual institutions show marked differences, significant at levels of confidence over 95 percent. A comparison of "reputational pull" and "facilities pull" is suggested as a means of differentiating the brand of different institutions. (Contains 31 references.) (Author/EV)

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The Impact of Facilities on Student Choice of University

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Abstract: *Despite rhetoric of added value, Facilities Management suffers a dearth of objectively researched, publicly available information concerning the impact of facilities on businesses at the level of market sectors or individual organisations. This paper aims to correct that situation for UK higher education institutions. A survey of undergraduates starting university in 2001 has confirmed, to high levels of significance, earlier research with the 2000 intake. For many institutions, facilities factors, where provided to a high standard, are perceived as having an important influence on students' choice of institution. Year-on-year comparisons show strong agreement at the global level and, where data could be gathered, at the institutional level. Individual institutions show marked differences, significant at levels of confidence of over 95%. A comparison of 'reputational pull' and 'facilities pull' is suggested as a means of differentiating the 'brand' of different institutions.*

Keywords: *Higher education, business impact, customer choice*

Introduction

The paradox of Facilities Management's (FM's) claims for strategic or value adding status on the one hand, and the subject's largely operational rhetoric on the other (Grimshaw, 1999), has become widely recognised in recent years. This has raised concern that the subject has failed to produce convincing evidence of its contribution to 'businesses' (Duffy, 2000). An intensive literature review (Haynes et al., 2000) seems to confirm the problem, and FM faces the challenge of either demonstrating its contribution or being limited to a relatively specialised future as the discipline of maintenance management (Price, 2002; Lord et al 2002). Nutt's and Mclennan's (2000) operational trail. The nature of the 'business critical' contribution of FM varies with sector (Price, 2002) and requires specifically tailored research evidence.

Various critical impacts of facilities on the 'business' of a university might be considered, depending in part where a particular institution is positioned, or aspires to position itself, on the widening strategic space of research and teaching options (Matzdorf et al., 1997; Price and Kennie, 1997). Facilities could for example be essential to attract key research personnel, or to provide environments for faster knowledge creation. Its impact on student perceptions of their pedagogic experience (Fleming and Storr, 1999) is not widely appreciated in the literature on lecture theatre design or pedagogy. Meanwhile conventional government-funded and student-funded undergraduate teaching remains a significant, and for many institutions still a dominant, proportion of income. This study investigates the degree to which facilities and locational factors influence the decisions undergraduates make when choosing where to study: effectively the impact of the facility on a core group of customers.

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Literature Review

Investigations into the process through which potential students determine their choice of university have increased over the past decade, though the subject seems to have received more, and earlier, attention in the USA (Discenza et al., 1985; Hossler. and Gallagher, 1987; Hossler, et al,, 1989; Heubner, 1989; Roberts and Higgins, 1992; Bredo, et. al., 1993; Lauren, 1993; Galotti and Mark, 1994;) where a marketing need came earlier than in the UK. In turn this means exploring the mechanisms through which decisions are made, the perceptions that potential students have of the university, and the contribution that these perceptions make to attracting or deterring application. In general the literature does not treat facilities as a potential differentiator or subject them to separate research. Our understanding, based on conversations with estates directors or equivalent, and on more than five years of research in FM for HE, is that most university marketing surveys pay comparatively little weight to facilities-related factors, despite evidence of their impact on the student experience (Green et al., 1994, cited by Yorke, 2000) and by reviews of literature on lecture theatre design and learning experience, which found a wide (and unbridged!) gulf between the architectural and pedagogical approaches (Fleming and Storr, 1999).

The term 'student-institution fit' (Banning and McKinley, 1980; Banning and Banning, 1986) has been suggested to examine "the degree of congruency, or fit, between student characteristics and the ability of the institution to respond to those characteristics" (p1). Characteristics of the student should fit with the ability of the institution to respond adequately to those characteristics, ultimately leading to increased student satisfaction, academic achievement and personal growth. Student enrolment and retention are determined in the theory by three sets of variables that comprise student-institution fit:

- characteristics of the student such as their personal goals, abilities, needs, interests and values;
- characteristics of the institutional environment, including the physical, academic, social and psychological variables, where facilities management has the most impact. Included in this variable is the physical design of the campus, such as its openness, privacy areas and wall decorations;
- the outcomes resulting from the interaction of the student with the environment. This will have an impact on the student's academic achievement, satisfaction and persistence within the institution.

Aspiring students today can apply for up to six places on many different degree courses offered by over 200 educational establishments. The vast range of degree courses and institutions available to them, make the decision-making process rather complex. As Tackey and Aston (1999) argue, "the feasible range of options are limited by a variety of factors but mainly educational qualifications, geographical mobility and financial considerations" (p. 2). Marketing literature concentrates on the decision-making process which consumers go through before purchasing a product. Kotler and Armstrong (1994) describe the stages through which buyers supposedly pass to reach a buying decision. *Need recognition* is triggered when the buyer recognises a need or a problem. It is followed by *information search*, an *evaluation of*

alternatives and a *purchase decision*. According to Kotler and Armstrong, the purchase decision derives from the consumer ranking the alternatives to formulate a *purchase intention*. Two factors may however intervene. The first is the attitude of others, whose influence will depend upon both the strength of the other person's attitude towards the buying intention and the consumer's motivation to comply with that person's wishes. For the potential student this could include parental attitudes and opinions to their child's university and course choice. The second is unexpected situational factors. Such unexpected situational factors for the potential student could be the failure to achieve the grades needed to warrant the course and university they had decided upon; achieving higher grades than expected, opening up opportunities for universities or courses not previously considered; or alternatively being offered a good job subsequently leading to further alternatives.

The Institute of Employment Studies (Connor et al., 1996; Tackey and Aston, 1999) surveyed over 20,000 students applying for entry to a full-time undergraduate course at a UK university or college in 1998. Questions were asked on who they regarded as being most influential on their choices, their perceptions of the costs of going to university, the likelihood that they would seek paid employment while studying, and views on their chosen university. For the information-gathering stage of the decision-making process, students consulted traditional sources such as UCAS handbooks and prospectuses, and made visits to the universities. More IT-based information, such as websites and CD-ROMs were least used overall. Cost was a significant factor in the choice process of the location of university. It encouraged students to consider choosing a university close to home. For the population included in this research, the most important factor when choosing a university was the course. Factors relating to the facilities management function of the university which were rated as being important were the 'overall image of the university' and the 'social life at university and social life nearby'. Of lesser importance relating to FM were 'accommodation for first years', 'safety and security' and 'sports facilities' (p. 42).

Discenza, et al. (1985) questioned US students about the importance they assigned to various considerations in selecting a university. Medium to least important FM-related variables were 'location', 'housing facilities', 'social/cultural/entertainment activities', 'athletic facilities' and 'dining facilities'. Courses offered were once again the most important variable. Roberts and Higgins (1992) questioned students who had studied at the universities for a year and found the most criticised aspects of their university relating to FM were 'poor facilities', 'housing/accommodation', 'buildings/site', 'Students' Union', 'overcrowding', 'social/sports', 'security and lighting', 'canteen' and 'split site'. The best-rated FM-related aspects included 'environment', 'academic facilities', 'sporting facilities' and 'Students' Union'. For first-year students the availability and quality of accommodation was found to be of high importance, and as such should be an important part of the marketing mix when recruiting students.

An ongoing UNITE/MORI study (Anon., 2001; 2002), sponsored by one of the main players in the field of private student accommodation, covers a range similar to that of Connor et al. (1996) and explores students' choice of university as one of the aspects of 'student living'. Their 2001 survey identifies 'location' and 'social facilities in town/city' as the second- and third-highest priority factors after 'course', with 'able to live at home', 'close to my family', 'able to travel home at weekends' and 'social facilities at university' also among the top ten factors influencing students' choice.

These ratings were generally confirmed in the 2002 follow-up survey (Anon., 2002, p. 13). However, the number of students for whom 'social facilities' were important fell from 24% to 20%, whilst most other location-related factors showed either the same or an even higher level of importance in the second survey (ibid.).

Overall, the results quoted above are somewhat patchy, and the research so far has made no attempts to draw institution-specific comparisons: a gap that this project was designed to fill.

Research Methods

Access for the research was granted by institutions who participate in FMGC's Research and Application Forum HIGHER EDUCATION. Practical reasons of sample size dictated a questionnaire based survey and, in consultation with Forum Members a survey instrument was designed and piloted on the 1999 student intake. A total of 87 closed questions sought rankings of importance on a standard five point Likert scale defined as 'essential', 'important', 'neither important nor unimportant', 'unimportant' and 'not important at all'. These categories were scored from 5 to 1 respectively. Twelve questioning modules were included, among them 'type of university', 'reputation of town/city', 'accommodation', 'learning facilities', 'university security', 'transport', 'social facilities', 'sporting facilities', 'childcare facilities' and 'university environment'. Scores of 3.75 and above are classified as 'important', 3.25 and lower as 'unimportant'. Ratings of 4 or above are considered as 'highly important'. Before the closed questions two open-ended questions asked students to list up to three reasons why they chose a particular university and three reasons why they did not choose an alternative institution.

The methods of distribution of questionnaires varied. Some facilities/estates departments were not able to secure the collaboration of the registry or marketing department at all. Some distributed the questionnaire in the offer package, others in freshers' week or with offers of accommodation. Where all first-year students were accommodated in halls of residence (under central administration), questionnaires were given out and collected there. Wherever we can identify potential bias, this is highlighted below. The problems do illustrate the generic issue of FM visibility. Across the majority of the universities, access to students was closely 'guarded' by the university's Academic Registry. Often this part of the university were unaware of the Forum membership and details had to be provided before access to the students was even considered. In some institutions, access to students was entirely dependent on individual faculties'/schools' co-operation, whilst others organised distribution and collection centrally. From several participant institutions, we got the reply "Oh no, not *another* questionnaire!", as freshers were already 'inundated' with information packs and survey questionnaires. This raises questions about the relationship between facilities providers and their customers – if one can't reach the other, how can the providers be expected to deliver good value to their customers? Some institutions did not see the need for 'another' survey, since they had already embarked on an in-house data-gathering exercise (e.g. student satisfaction surveys). These surveys would indeed complement our research, but would not provide data beyond the individual institution, and therefore not allow for comparison with other institutions and across the sector.

The pilot tests nonetheless proved robust and two surveys were conducted with samples from the 2000 and 2001 intake. Response rates are shown in Table 1. In total the responses cover more or less the full spectrum of universities from Russell Group members to the 'post-1992' sector; but the sample is limited to England and excludes the 'research elite', the group of institutions in the top six places of various RAE league tables.

University code	Year	Questionnaires out	Responses	Response rate (%)
A_1	2000	2,600	1245	47.9%
A_2	2001	2,000	1228	61.4%
B	2001	5,000	1714	34.3%
C	2000	3,000	438	14.6%
D[2]	2000	*7,000*	1106	*15.8%*
E	2000	2,500	244	9.8%
F	2000	2,700	353	13.1%
G	2001	3,550	552	15.5%
H	2001	1,200	358	29.8%
I_1	2000	4,000	844	21.1%
I_2[3]	2001	*n/a*	78	*n/a*
J	2000	7,000	412	5.9%
L	2000	400	32	8.0%
O	2000	500	138	27.6%
Sub-total	2000	29,700	4812	16.4%
Sub-total	2001	11,750	3930	35.3%
Total		**41,450**	**8742**	**21.1%**

Table 1: Response rates for 2000 and 2001

In terms of statistical validity, the total sample has Cronbach-Alpha values of .95 (Year 1) and 0.96 (Year 2) indicating a very high level of internal consistency – values of .7 and above are normally considered to be significant.

[2] Numbers for University D are estimates, since distribution was very decentralised and the exact number of questionnaires given out could not be established. A higher estimate obtained said: 11,000 questionnaires out ⇒ response rate 10%, total 33,700, average 15.8%.

[3] University I could not put a large-scale distribution process in place before term, hence arranged for individuals to be surveyed by a postgraduate student. Strictly speaking, the 78 questionnaires make up a response rate of 100%, but this would seriously skew the overall response figures.

Overall Findings

Closed questions

In both surveys a higher proportion (between 52% and 70%) of female students responded; in fact, the proportion (52%) was unchanged in University A which returned significant numbers in both surveys. The two surveys did not show overall differences in age range of students, geographic origin, ethnic origin or course; however, significant differences were found between individual institutions (see below).

In the 2000 survey 12 factors had average importance scores of 4 or above. In 2001 this number fell to 11, though the differences are small (Table 2). The top eight factors, on average, are identical. Of the top six, two might be considered entirely pedagogical: 'course' and 'teaching reputation'. Four relate to impressions of the study facilities. Of the next six, in both surveys, four might be considered 'pure' facilities factors, and two might be influenced by facilities. The evidence provided by the 2000 survey, namely of the importance of factors other than academic reputation in decision-making, was confirmed in 2001.

ITEM	2000 average	2000 ranking	2001 average	2001 ranking
Had the course you wanted	4.84	1	4.80	1
Availability of computers	4.48	2	4.41	2
Quality of library facilities (e.g. availability of books, journals, CD-ROM, IT)	4.47	3	4.41	3
University had a good teaching reputation	4.35	4	4.29	4
Availability of 'quiet' areas (e.g. library, study rooms)	4.23	5	4.22	5
Availability of areas for self-study (e.g. group work areas)	4.16	6	4.21	6
Quality of public transport in the city/town	4.07	7	4.13	7
A friendly attitude towards students	4.05	8	4.04	8
Prices at the catering outlets	4.01	9	4.00	13
Cleanliness of the accommodation	4.00	10	*3.92*	*15*
Quality of the university grounds	4.00	11	*3.94*	*18*
Availability of university-owned accommodation	4.00	12	4.00	14
Quality of lecture theatre facilities	*3.90*	*18*	4.03	9
Quality of bars on campus	*3.90*	*19*	4.01	11
Union social facilities	*3.92*	*17*	4.01	12
Diversity/range of shops at the university (e.g. banks, bookshop, travel agents, food)	*3.95*	*15*	4.01	10

Table 2: Average ratings of 4 or higher in the two surveys

For reasons of confidentiality individual institutional data cannot be published; however, it is important to note that for University A, the only participant to return a statistically significant sample in both years, the order of the highest items was unchanged and average scores varied by no more than a trivial +/-0.02.

Open-ended questions

All responses were coded in 2000 and assigned to categories. In 2001 we found that no new categories emerged, hence the same categories were used. Since the number of reasons given varied between one and three per respondent, and, for

reasons against other institutions, between none and three, the percentages given here are in relation to the total of reasons given, *not* respondents. In total, 22,627 'reasons for' and 16,855 'reasons against' were analysed. In general the average results from the two years are strikingly similar for items universally mentioned in 3% or more of reasons given (Table 3). In each case individual items at particular institutions also attracted a 3% rating.

The one big change is in the frequency with which course was mentioned, especially as regards a reason for not choosing other institutions but also as a reason for choice. It appears that the availability of a particular course is becoming more of a 'hygiene' factor; something which is essential but is not seen necessarily as differentiating one institution from another.

Reasons for choosing a university	2000 average	2001 average
Course / subject	22.2%	20%
Reputation of course / department / school / university / League tables	18.2%	18%
Convenient location / proximity to home	10.4%	10.5%
Location	6.7%	7%
Facilities resources	6%	5%
Reasons for deciding against alternative institutions		
Course not suitable (in some way or other)	20.5%	13.5%
Quality / standards / reputation / league tables	9%	8%
Did not get grades / no offers etc	5.5%	6%
Distance too far	10.5%	12%
Location	7.5%	7.5%
Didn't like area / place / city unfriendly etc	5%	5.5%

Table 3: Open-ended items cited by at least 3% of respondents in each institution in each year[4]

Inter-organisational Differences

General Observations

Both the above comparisons point to the survey instrument being reliable and capturing real preferences consistent from year to year. However, a look beyond the apparent homogeneity of the averages reveals major differences between institutions. In 2001 the number of factors rated '4+' (four or above) varies from a minimum of 8 to a maximum of 32, with two distinct groups, one consistently with 10 or fewer factors and the other with 23, 26, 31 and 32 factors respectively. The groups did not correlate with university type. Each included at least one 'modern' university and at least one research-led institution. They did correlate with visual estimates of campus quality in that two of the 'high scorers' are based on single, well maintained campuses, and the others are institutions that, although on multiple sites, are known to us for having made strategic investments in upgrading their estate (and reducing net costs in quality driven approaches to estates and facilities management). There was then evidence that where the estate has been treated as a strategic asset it

[4] The average score is the average of mean results overall and mean results by institution.

figures more prominently in students' perceived reasons for choosing a particular institution. Not surprisingly the four institutions with more factors in the 4+ rankings had higher overall scores for the importance of facilities-related factors in student choice. In 2002 the situation was more complicated. University A was confirmed in the 'facilities-attractive' group with 26 4+ factors, and a further participant known to have invested in new campus facilities recorded 24 4+ scores. At the opposite end, a participating institution without campus investment joined the low-scoring group with 8 high-importance factors. However an 'intermediate' position was established by a university that registered 18 4+ ratings, whilst the institution which had scored most strongly in 2000 had only 15 factors rated as important in the second round, albeit from a much smaller sample, which was also taken fairly late (halfway through the first term). Furthermore, the same institution had, in 2000, distributed its questionnaires by sending it out with accommodation offers. Since the university could only offer approximately 70% of freshers places in university-owned or -managed accommodation (80% in 2002), this distribution method carried the risk of an accommodation bias in the 2000 sample. For both this reason and the low 2001 response numbers, the results for this institution had to be viewed with some caution. Clearly some bias can be expected, although the latter sample was too small to skew the overall results. Nevertheless, this prompted us to examine distribution methods in other high scorers, all of whom confirmed that efforts had been made to distribute to all students, not just those entering university-owned accommodation.

The availability of a desired course was universally rated as the most important factor in every institution, though even here the level of importance attached to this factor showed significant differences (at the 99% level) between the three highest-scoring institutions and the lowest-scoring one. Notably the latter institution had higher ratings for a number of factors relating to the university environment and facilities. Where universities possess a particularly distinctive location and campus, the survey results clearly indicate that this is a marketing lever.

Apart from the number one item, 'course', there is no consistent ranking throughout all institutions. The 'availability of computers' is universally one of the top three items, sometimes relegated to third place by the 'availability of library facilities' and in one instance by the university's teaching reputation. 'Quality of library facilities' reaches the top three in all but two instances: one case is the institution where 'teaching reputation' scored as particularly important, the other one where (by a statistically insignificant margin) the importance of library facilities was edged into fifth place by the 'cleanliness of the accommodation'!

Academic Factors

In a survey aimed at discriminating the relative importance of facilities factors only two strictly academic criteria were entered: the university's reputation for teaching and for research. The former is reported as much more important (in fourth place overall) than research reputation, which sits far down the list in fiftieth place. The overall correlation between the two is weak (0.46 in 2000).

Teaching reputation receives very high importance ratings in two institutions. One, an 'elite' research-led institution, scores significantly higher (at the 99% plus level) than all the others, except the second one, a modern university. That institution

scores significantly (95% to 99%) higher than four of the remaining six. At the opposite end of the ratings, one institution scores significantly less, at the 99% level, than five others. We have not tested whether higher scores for importance reflect students' perceived judgement of the actual quality of any factors, though many individual differences (see below) suggest they do. To whatever extent the differences in perceived teaching quality reflect a reality – they are either disturbing or encouraging news for three institutions in particular.

To some extent the answers to the ratings for the importance of **research reputation** support the conclusion that judgements about actual quality are being made. One top-tier research-led institution scores significantly more highly (at the 99% level) than all but two institutions, one a modern university and one not. A second institution in the same league, whilst clearly showing significantly higher scores than four others, scores significantly less than the first. The institutions for whom reputation for teaching is particularly positively or negatively relevant are not those for whom research reputation is markedly different.

Other Non-FM Factors

'Proximity to home' was significantly less important (at 99%) for entrants to one of three 'research led' institutions – lower than all but one other participant. It was also significantly less important for freshers at one new university than to the two others and another city centre institution.

'Opportunities for part-time employment' were significantly less important (95% to 99%) in the institutions attached to smaller towns/cities.

'Graduate employment rate' showed few significant differences except between the highest and lowest rating institutions.

'Parents' opinion' tended to be of more importance in universities with campuses/colleges but only in a few cases the difference could be claimed as having high levels of significance. Interestingly 'parental opinion' was significantly more important in the choices made by students who had attended open days. The difference between the two groups is the largest for any factor. 'Friends' opinion' shows no significant differences while 'cost of living' seems a significantly more important factor to students attending two metropolitan universities but not two others. The scores do not correlate with those for 'proximity to home'.

The location of the campus in a major city was significantly more important (at 99%) for one institution that has made a considerable investment in such a campus and also significantly higher for another with some such investment. Not surprisingly the factor was of lowest importance to those students who had chosen smaller towns/cities and for whom the location in a small city/town was significantly more relevant. No 'out-of-town' campuses were represented in the group but with that proviso expressed, importance closely follows the form of the campus or physical location. Overall however, the type of campus comes way down on the importance list; and even if the strong differences expressed by those who had chosen particular types were factored out, 'type of campus' would not reach the top 50 factors for the

sample. 'Collegiate structure' was only significantly different for the institution which operates a collegiate system, but even there it comes 37th in the order of priority.

'Crime rates' revealed few significant differences. One city university which had emphasised its low crime rate in its latest publicity materials, scored a significantly (at 99%) higher importance rating than others and scored more highly for having a 'friendly attitude towards students' than others. It may be no coincidence that an institution which has invested more than many in the development of ancillary staff and has used them, deliberately, as 'roving ambassadors' on open days, received strong ratings for that aspect and for its student-friendly attitude.

Facilities Factors

Accommodation factors tend to follow provision. The importance of 'availability of university-owned accommodation' was, hardly surprisingly, significantly lowest for three institutions where 'proximity to home' was significantly more important. These institutions also had higher proportions of mature students. The 'availability of self-catering accommodation' was rated significantly lowest in a collegiate institution (where basically all first-year students live in catered halls anyway), and high in three institutions that have gone to pains to arrange it (though not necessarily *own* it).

Catered halls were of significantly higher importance in the institutions which provide them. In two of the three, where en-suite facilities are provided, they were rated not only significantly more important but actually in the 4+ list; a stark contrast to most other accommodation ratings, which in general did not show this as an important factor. The message seems to be that where higher-quality arrangements are made, they are perceived as such and become differentiating factors. The same institutions receive significantly higher importance ratings for 'IT in bedrooms', 'telephones in the accommodation', 'cleanliness' and 'cost', factors where the population breaks down into two groups, one of which rates accommodation factors generally significantly higher than the other. They higher-scoring quartet are the same institutions that receive the higher number of 4+ scores overall. With various slight differences of emphasis, the same group generally receive higher ratings on other factors relating to accommodation.

Generally all questions relating to **learning and teaching facilities,** especially library facilities and the availability of computers, receive high importance ratings throughout. Again two groups exist, showing to varying extents significant differences on most aspects except the 'availability of quiet areas for study'. Interestingly the groups are not the same as those for accommodation. The institutions whose research reputation was most significantly rated as important tend to receive lower significance ratings for the importance of teaching accommodation and library facilities. In general importance ratings seem to coincide with the researchers' impressions of aspects of physical quality gained during benchmarking visits, though it has to be emphasised that no rigorous verification has been attempted. In general higher quality environments do seem to have an impact on choice; a conclusion that may also lead to problems of expectation, if impressions gained during recruitment are not matched by subsequent reality.

Discussion

With those caveats the conclusions reached from the 2000 survey were confirmed strongly in 2001. Groups of institutions with wider FM appeal do not correlate with university type. Each group includes at least one 'modern' and one 'research-led' university. They do correlate with visual estimates of campus quality. There is evidence that where the estate has been treated as a strategic asset it figures more highly in students' perceived reasons for choosing a particular location. This is not necessarily a description of an objective reality. Service quality literature is divided as to whether 'importance' and 'satisfaction' can be objectively separated (Robledo, 2001). It is quite plausible that respondents to the questionnaires attached greater notional importance to factors which they perceived as being better supplied: i.e. that they were more satisfied with. On the other hand, it can also be argued that dissatisfaction with a particular service or product might lead to greater attention to this factor and hence higher importance ratings. We have not been able to investigate this in depth, but a number of open-ended 'reasons against' suggest the possibility.

That does not, however, detract from the potential of these factors to differentiate any particular institution. Models of customer service also tend to differentiate so-called 'hygiene factors', without which a customer's basic expectations remain unfulfilled, and 'differentiators', those aspects of a product or service which influence decisions on repeat business. Student choice does not, at least on the timescale of a few years, become repeat business[5], and it is perhaps hard to conceive of the top eight factors (Table 1) as hygiene items. They are, however, what a university *must* have if it is to attract either particular students (the course) and students in general (learning facilities, good teaching, access and a student-friendly attitude). It is the other items, especially many facilities or estates factors that can often differentiate a particular institution. In both years this point was confirmed by reference to specific examples.

In the 2000 survey we identified one member of the low-scoring group as 'facilities-independent'; that is as having a perceived reputation that made it especially attractive to students. In the open-ended questions this was the only institution where comments relating to the university's overall reputation were much more frequent (by a ratio of over 2:1) than those related to having a particular course. One other institution had a ratio slightly above 1:1: i.e. reputation was mentioned more frequently than course although the ratio was lower: In 2001 a new (to the survey) participant had a ratio approaching 2:1 while University A, which had seen a rise in popularity, as recorded by UCAS statistics, between the two application years, saw the ratio change from slightly under to slightly over 1:1.

[5] Though the growing importance of alumni and life long learning is acknowledged

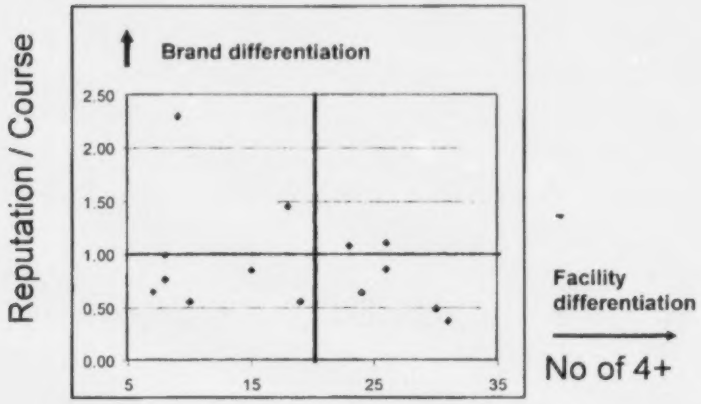

Figure 1. The position of individual institutions according to the number of 4+ factors recorded in the survey (x-axis) and the ratio of 'reputation' to 'course' in reasons given for choosing a particular institution (y-axis)[6]

Taking these responses, and the overall number of factors scoring 4+ begins to identify a means of segmenting the undergraduate 'market' (Figure 1), one which bears parallels with recently developed scenarios (Matzdorf and Price, unpublished; Collis, 1999). One scenario, identified by Collis as the 'liberal-arts college', has been dubbed in our work the 'St Andrews Strategy'[7]; the appeal to the social as well as the intellectual role of a particular institution. It is of course a moot point how sustainable such a strategy is without some form of differential financing but one can see the upper left-hand quadrant of Figure 1 as tending towards such a strategy. The lower right on the other hand is 'facilities-differentiated' using provision of modern campuses as a factor in recruitment. Towards the upper right lies appeal on both reputational and facilities factors, though it remains to be tested whether the highest scorers in academic reputation terms, the 'RAE elite' are differentiated from the 'St Andrews strategists'. Institutions in the lower left quadrant meanwhile struggle to differentiate themselves on either ground, a position which may only be sustainable with low costs and high volumes and which even then is vulnerable to better positioned competitors. We note that among the 'new' universities in our survey some have developed 'facilities-led' positions while one has achieved near parity of reputation and course.

Further statistical analysis of the data to refine a simpler component model of facilities impact on student choice is planned. Meanwhile for a number of institutions that impact is clearly and unambiguously confirmed.

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[6] Identities have been removed for reasons of confidentiality
[7] Referred to as the 'Wills effect': e.g. THES 29/03/02

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